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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,523	01/26/2005	Guy Marck	Q85512	7429
23373 7590 08/11/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER LSTVOYB, GREGORY				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
08/11/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/522,523

**Applicant(s)**

MARCK ET AL.

**Examiner**

GREGORY LISTVOYB

**Art Unit**

1796

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-17 and 19-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-13, 19-20 and 41 is/are rejected.
- 7) ☒ Claim(s) 11, 14-17 and 21-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date 4/21/2009.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

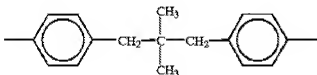
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

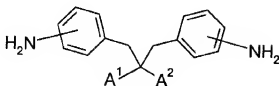
Claims 3-10, 12-13, 19-20 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Takao et al (US 6139927) herein Takao (cited in the previous Office Action).

Takao discloses a diamine used in the liquid crystal aligning materials (see Abstract) of Formula 1, where A1 and A2 are Alkyls (Column 3, Example 20 and Column 3, line 55).

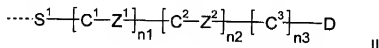
For instance, Takao teaches diamine of the following formula (20) (see Column 56):



Claimed formula 1 of claim 3 is the following:



where A1 and A2 are represented by the following formula II:



If  $n1=n2 = n3 =0$ , the above formula II transforms to S1-D fragment, where S1 is equal to a single bond and D is equal; to alkyl residue.

However, although Takao broadly teaches Alkyls (see Column 3, line 65, where R1 and R2 are alkyl groups), the reference does not teach Alkyl with 5-24 carbons.

The position is taken that Takao's teaching encompasses the subject matter claimed, since definition of alkyl is broader than claimed Alkyl with 5-24 carbons.

Note that Takao does not teach such Alkyls in his Examples.

According to MPEP 2123, disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments (see also *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971), *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994), *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Therefore, it would have been obvious to a person of ordinary skills in the art to consider Takao's diamine as having broad range of alkyl moieties, including one having 5-24 Carbons.

Note that dependent claims 4-5, 12-13 do not claim that  $n_1, n_2$  and  $n_3$  are not equal to 0. When  $n_1=n_2=n_3=0$ , the corresponding units are not presented in the diamine claimed.

Regarding claim 19-20, the position is taken that alkane chain of Takao's diamine can be isomerized at high radiation level.

Note that Claim language of the claims above ("which can be photoisomerized on exposure to UV or laser light") claim only a possibility of the photoisomerisation and permits the presence of any additional materials (catalysts, promoters, co-reactants, etc.) in the process.

In reference to claim 41, Takao teaches a liquid crystal orientation material based on the above diamine (see Abstract)

***Allowable Subject Matter***

Claims 11, 14-17 and 21-40 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 4/21/2009 have been fully considered but they are not persuasive.

Applicant argues that Takao's is different from that of the present invention of formula (I). The substituents A1 and A2 in example 20 of Takao are methyl groups, whereas A1 and A2 of the present invention are an alkyl chain with at least 5 carbon atoms (see above the citation of claim 3 of the present invention).

However, Takao broadly teaches Alkyls (see Column 3, line 65, where R1 and R2 are alkyl groups. The position is taken that Takao's teaching encompasses the subject matter claimed, since definition of alkyl is broader than claimed Alkyl with 5-24 carbons.

Examiner agrees with Applicant's arguments that Beilstein Institute reference does not meet the limitations of claim 3, since A1 and A2 are defined in the proviso of claim 3 to be an alkyl of at least 5 carbon atoms if n1, n2 and n3 are zero.

Thus, rejection based on Beilstein Institute is withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GL

/David Wu/  
Supervisory Patent Examiner, Art Unit 1796